ACC.12
61st Annual Scientific Session & Expo
ACC-i2 with TCT innovation in intervention

E1958
JACC March 27, 2012
Volume 59, Issue 13

Valvular Heart Disease

TRANSCATHETER AORTIC VALVE IMPLANTATION (TAVI) IN PATIENTS WITH LOW-FLOW, LOW-GRADIENT AORTIC STENOSIS

ACC Oral Contributions
McCormick Place North, N427
Sunday, March 25, 2012, 8:15 a.m.-8:30 a.m.

Session Title: Valvular Oral
Abstract Category: 11. Valvular Heart Disease: Therapy
Presentation Number: 915-4

Authors: *Alexander Lauten, Ralf Zahn, Jochen Senges, Hans R. Figulla, on behalf of the German Transcatheter Aortic ValveInterventions-Registry Investigators, University Heart Center Jena, Department of Cardiology, Jena, Germany, Institut fuer Herzinfarktforschung, Ludwigshafen, Germany*

Background: Transcatheter aortic valve implantation (TAVI) is an alternative treatment for high-risk patients with aortic valve disease. Herein, we investigated the efficacy and outcome of TAVI in patients with low-flow, low-gradient aortic stenosis (LG-AS) based on data from the prospective multicentre German Transcatheter Aortic Valve Interventions-Registry.

Methods and Results: Between January 2009 and June 2010, a total of 1302 patients undergoing TAVI were included in the registry. LG-AS was present in 149 (11.4%) patients with a mean age of 80.2±6.3 years (57.0% males; EF 37.8±14.4; mean pressure gradient 31.3±13.3). In this subgroup, the EuroScore was significantly higher (26.8±16.6 vs. 20.0±13.3; p<0.0001) compared to atients with high-gradient aortic stenosis (HG-AS). In 87.9% of LG-AS-patients, the procedure was performed transfemorally. Procedural success was achieved in 95.3% with a mean postoperative gradient of 5.6±5.3mmHg. Compared to HG-AS patients, there was a higher rate of urgent TAVI-procedures in the LG-AS subgroup (24.8% vs. 14.5%; p<0.01). The rate of TAVI-associated complications was comparable in both groups (permanent pacemaker: 33.8% vs. 35.4%; p=0.77; cerebrovascular events: 3.4% vs. 3.1%, p=0.83). However, postoperative low output occurred more frequently in patients with LG-AS (LG-AS: 14.9% vs. HG-AS: 5.7%, p<0.00001) and mortality at 30 days and 1 year were significantly higher in this subgroup (LG-AS 12.8% and 36.9% vs. HG-AS 7.4% and 18.1%; p<0.001 and p<0.0001). In both groups, there was a significant postoperative improvement in NYHA functional class and self-assessed quality of life, demonstrating the substantial benefit of TAVI also in patients with LG-AS.

Conclusion: In high-risk patients with LG-AS, TAVI is associated with a significantly higher mortality at 30 days and at 1 year. However, long-term survivors benefit from TAVI with functional improvement and a significantly increased quality-of-life. Therefore, in view of the poor prognosis with medical treatment TAVI should be considered as treatment option in high-risk patients with LG-AS.